



## Material Data Sheet

# PLMPUR-SL | P1203 (TPU)

### General Information

PLMPUR-SL is a polyurethane elastomer based on Polycarbonate polyol, combined with solid lubricants. This material has excellent tribological properties, meaning superior sliding performance and high wear resistance under poor lubrication or even non-lubricated conditions. Other physical properties, such as tensile performance and elasticity, are similar to PLMPUR-H.

PLMPUR-SL is primarily used for sealing applications with requirements for high wear resistance and low frictional loss. This material is particularly suitable for high speed movement as well as low speed and stationary applications, and for conditions without lubricating media. Furthermore it is recommended for use in applications with poor lubrication performance such as pure water conditions.

### Physical properties

|                              |                      |                   |             |
|------------------------------|----------------------|-------------------|-------------|
| Colour:                      |                      |                   | Black       |
| Hardness:                    | DIN ISO 7619 (3 sec) | Shore A           | 95 +/-2     |
| Hardness:                    | DIN ISO 7619 (3 sec) | Shore D           | 48 +/-2     |
| Density:                     | DIN EN ISO 1183-1    | g/cm <sup>3</sup> | 1.21+/-0.02 |
| 100% Modulus:                | DIN53504             | N/mm <sup>2</sup> | ≥15         |
| Tensile strength:            | DIN53504             | N/mm <sup>2</sup> | ≥48         |
| Elongation at break:         | DIN53504             | %                 | ≥350        |
| Tear strength:               | DIN ISO 34-1         | N/mm              | ≥110        |
| Compression set: 24h/70°C*   | DIN ISO 815          | %                 | ≤27         |
| Compression set: 24h/100°C** | DIN ISO 815          | %                 | ≤33         |
| Abrasion:                    | DIN ISO4649          | mm <sup>3</sup>   | ≤17         |
| Min.service temperature:     | ISO 11357-2          | °C                | -20         |
| Max.service temperature:     | ISO 11357-2          | °C                | 115         |

\* 24 h 70°C 20% deflection/\*\* 24 h 100°C 20% deflection

### Remark

All test methods and values mentioned above are corresponding to ISO and/or DIN standards. The properties have been determined on standardized test specimen and can not be directly related to any component or finished item. All tests are made under laboratory conditions. The mentioned values are nominal values and must be fulfilled – considering related tolerances – for each material batch.

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